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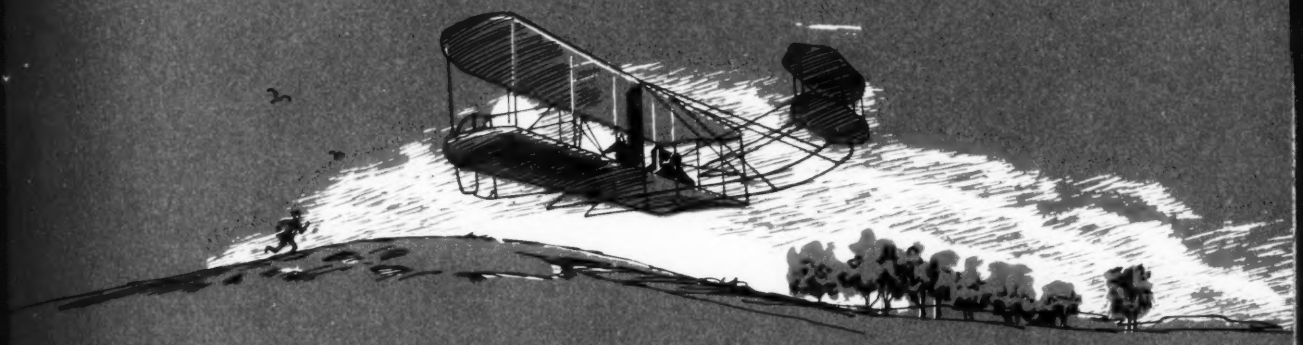

Rockford's "Ounce of Prevention"

Where To Now in Aviation?

This Dollar Yields Big Benefits

The Perils of Food Poisoning

Sneezeless Serenity—Science's Goal

Just Ahead on Our Highways

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OUR COVERS

TWO BROTHERS flipped a coin as a prelude to this drama (front cover), but the fate and fortunes of flying since then have been a story not of raw chance, but of imagination, courage and American enterprise undergirded by insurance.

Orville Wright lost the toss of the coin to his brother, Wilbur, for the first try at powered flight in the Kitty Hawk plane, but fate decreed that Orville succeed after Wilbur had made his suspense-filled but futile first attempt. Thus began the story of aviation (page 5).

Today (back cover) the unquenchable spirit of the Wright Brothers flies with every new advance in the aviation industry. This is America's first jet transport, the Boeing 707, now in transatlantic service by Pan American Airways. As of mid-1959, 16 major world airlines and the U. S. Air Force had ordered the 600-mile-an-hour jets. ⊙

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HALF

The Home Fire Loss

Firemen, home inspecting, have earned the plaudits of Rockford for fire prevention.

How a city does it with home inspection.

By Paul Friggens

ONE DAY two years ago, Rockford, Illinois, Fire Chief Wayne E. Swanson went on the radio and TV to plead with local housewives: "Our firemen appreciate the good will and coffee at your homes, but we just don't have the time to visit, and my boys can't drink all that coffee!"

Chief Swanson was serious. The Rockford fire department was in the midst of its first door-to-door home dwelling inspection, and hospitable matrons were slowing down the job. The trouble was that Swanson had prepared almost too well: weeks in advance the public had been alerted that fireman teams would visit every home while new two-way radio equipped rigs kept them in constant touch with headquarters. Scores of Rockford women responded with coffee, pie and doughnuts until the fire department had to flash its own call for help.

The object of the inspection program, of course, was to uncover home fire hazards—the biggest single fire problem in the U. S. Rockford has earned a Class 3 insurance rate, which puts it in the lowest rate bracket, owing to its excellent fire defenses. Home by home and inhabitant by inhabitant, the successful home inspection program is the ultimate in fire safety.

"Home dwelling inspection is one of the best things that this city has ever done," Rockford

citizens declare today, and no wonder. Officials credit the campaign with slashing Rockford home fires in half.

This summer, Rockford firemen called on the city's 35,000 homes again. And something new was added. Homes were checked for invalids or the infirm. A reflective decal that can be seen at night has been placed below the house number at each of these homes. In the event of fire at any of these residences, firemen will know immediately that they have that type of person to evacuate.

In every way possible, Chief Swanson is determined to drive Rockford's residential losses even lower.

The home inspection program is put on every two years. Inspection for industry is every year. One day recently, I visited the northern Illinois city to learn firsthand how the amazingly successful program operates.

Three Main Hazards Turned Up in Inspections

At 9 a.m. sharp, a fleet of shiny equipment—pumpers, ladder trucks and rescue squad manned by some 140 firefighters—wheeled out from their respective stations to cover all sections of the fast-growing city. Each rig with a four-man team sped to its designated district, parked mid-block, and while one fireman was left to man the two-way radio in case of an alarm, the others commenced their door-to-door calls.

Dressed in their regulation blue uniforms with neckties, the firemen were a trim and courteous crew. "We're not here to *order* anything," they assured householders, "but to show you a few things that will make your home safer." Then the firemen systematically inspected the property from the garage and grounds to the basement. "The living quarters are inspected only by invitation," I was told. "The toughest fires start in the basement." I found the Rockford firemen, however, warn the housewife about all possible hazards elsewhere in the home. They uncover plenty!

"Day after day we turn up three main hazards," explained Leo E. Keenan, director of the Fire Prevention Bureau. "We find that homes are loaded with electric appliances and electric services and are over-fused. Others are cluttered with rubbish, oily rags, open paint cans, or are strewn with newspapers and magazines. And a lot of people are risking their lives by doing their own amateurish home wiring."

"You should have seen the run on the stores after that first inspection," a businessman told me. "Firemen discovered almost 6,000 homes were over-fused or had bad wiring." I found that about 250 home owners completely re-wired their basements. Today, as a result of this drive, the city requires 100 amp. wiring for all new or re-wired homes.

Thanks to advance publicity—through the newspapers, radio, TV, firemen talks to PTA, service clubs and other community groups—the first Rockford inspection covered 34,322 homes

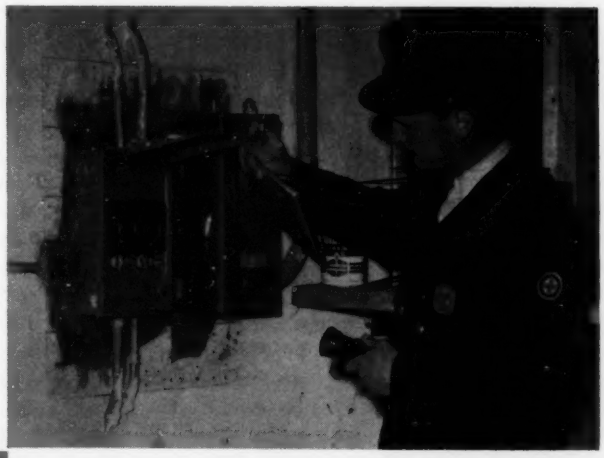
with less than 2 per cent turndowns. Ironically, one home that refused inspection had a fire soon after! Rockford records show that 36 homes which showed fire hazards during inspection, but which took no action, subsequently had fires. This year's inspection is showing a vastly improved picture. "Just the knowledge that we'll be around to inspect one of these days is enough for most people to clean house," says Chief Swanson.

Housewives Briefed on Major Causes of Fire

Besides spotting defective wiring and such hazards, Rockford firemen endeavor to educate the housewife about other major causes of fires. These are careless smoking, leaving food unattended on the stove, and allowing children to play with matches. One day as I talked with firemen in their quarters, I had dramatic evi-

Rockford's 35,000 home owners have welcomed inspection, with less than 2 per cent turndowns. "One of the best things city has done," they say.

areless storage and use of flammable liquids for ome dry cleaning are among the many fire haz- ds cleaned up by firemen and home owners.



Increased use of electricity has dangerously overloaded fuses and wiring in many homes. One-fifth of Rockford's homes harbored this hazard.

dence of this neglect. An alarm flashed and we dashed to a three-family apartment blaze in an older section of the city. As firemen rescued the invalided and babes in arms, I learned that children setting fire to attic curtains were to blame for what turned out to be a stubborn fire. A few days earlier, a four-year old playing with matches had caused a $5,000 fire loss.

Firemen Regarded as Helpful Public Servants

It's these lessons that Rockford firemen endeavor to impress on home owners, and no time for coffee please! The firemen inspect five days a week but from 9 to 12 only. "Women don't want us to interfere with their afternoons," a fireman explained. "And young mothers complain we wake up the babies."

Back at headquarters, I asked Chief Swanson to add up the Rockford experience. "Just look at the figures," he told me. "In 1956, before the home inspection program, our residential fire loss was $50,434. The first year of inspection, we cut this in half!" Incredibly, Rockford's 1957 loss was only $21,365. Again in 1958, Rockford held the loss down to $34,801, and this in the face of a booming population and a bad winter.

Swanson went on: "While we're gratified at these figures, our inspection has produced another dividend—people are taking an entirely new view of the fireman. He isn't just the helmeted guy who rescues you with a ladder. He is a helpful public servant who can show you how to prevent that fire in the first place."

HERE'S THE INSPECTION HANDBOOK

HOME INSPECTIONS, such as Rockford's described here, are the answer to about two-thirds of the fire problems of municipal fire departments. This is vouched for in a new booklet, "Home Inspections by Fire Departments," just issued by the Federation of Mutual Fire Insurance Companies, 20 North Wacker Drive, Chicago. About 65 per cent of the fires within buildings occur in homes. Two-thirds of people who die as a result of fire lose their lives in these home fires.

The booklet, now getting wide distribution, combines all the good points of many home inspection programs into a model plan that will fit any town or any fire department, large or small. ⊙

Half the Home Fire Loss

As a curious evidence of the Rockford program, the fire department now gets more alarms than ever before. "But we welcome them," says Chief Swanson. "We tell people: 'Don't fight a fire. Call us. It's our business.'" (That doesn't rule out the speedy use of the home fire extinguisher in Rockford, however.)

So the fire rigs are wheeling down every block in Rockford again this summer, and a lot of people call in for a special appointment if for any reason they miss the firemen. Hundreds telephone in to say: "We're all cleaned up and ready for you. Why haven't you been here yet?"

"With such a spirit," says Swanson, "we think inspection every two years is sufficient. We don't want to overdo a good thing."

Though home dwelling inspection didn't originate in Illinois, Rockford has shown what one town can do—and no doubt any city, too, if it doesn't already inspect homes. Matter of fact, home dwelling inspection is rapidly developing with paid fire departments from coast to coast.

An all-out program of home inspections would cut dwelling fires and deaths by 50 per cent in most cities, experts told the National Fire Protection Association recently.

Portland, Oregon, was one of the first cities in the United States to inspect home dwellings. It first launched a program back in 1914, and with the advent of two-way radio embarked on a much more effective drive. "The first year of our new program we had 28 per cent fewer dwelling alarms than during the previous five years," Portland Fire Marshal Dale F. Gilman told the *Journal*. "Now after eight years' trial we have reduced dwelling fires in which losses actually occurred by nearly 50 per cent." The successful Portland program has now spread state-wide. Oregon is the first state to inaugurate general home inspection.

A report from the Oregon state fire marshal asserts: "It is becoming increasingly difficult for fire departments which are not carrying out a home inspection program to justify their inaction in view of the public acceptance of the program. As to the lack of legal authority to enter a man's home, we find it is not a factor because we are invited in as guests. The thing to remember is that inspection should be made on the basis of courtesy and not law."

New York Prevents About 10,000 Fires a Year

Among the major cities adopting home inspection, New York has run up an amazing record in four years.

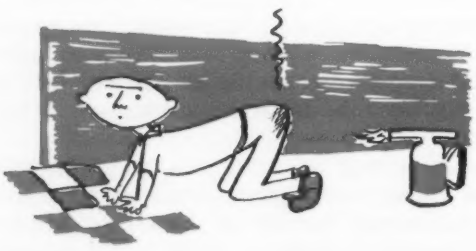
"It used to be that 80 per cent of the fire-fighting force was immobilized in the fire stations," says Fire Commissioner Edward F. Cavanagh, Jr. "The use of the two-way radio has changed all this. Now all of our fire-fighters, when not actually engaged in extinguishment, are building inspectors. Whereas we formerly had but one inspector in a company district, we now have five or six working as a team. And hand in hand with the increase in inspections, we have had a distinct rise in the quality."

The pay-off is that New York City, with nearly 70 per cent of its fires residential, has been able to prevent about 10,000 blazes a year! "What's more, with the cumulative effect of our educational and inspection campaigns, we expect a still further decrease," says Commissioner Cavanagh.

The home fire prevention program is no longer an experiment. Today it has the solid backing of the International Association of Fire Chiefs. As Chief Swanson, a recent president of the IAFC, declares: "Everywhere that a city tries home inspection the people like it. Our big job now is to sell it to more fire departments."

And there's no more persuasive "sell" for home inspection than the one which Benjamin Franklin, the father of American insurance, gave to such vigilance more than 200 years ago when he was crusading against fires in Philadelphia: "An ounce of prevention is worth a pound of cure." ⊙

INSURANCE DOES IT!



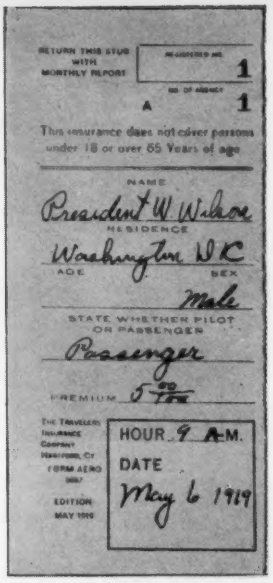
A do-it-yourselfer, using a torch on a tile job, got careless with the flame, was badly scorched, might have had a tragic fire. Insurance outlay, which figures in premiums, was $611.

FROM OUR ANNALS

Twentieth Anniversary

NATIONAL AVIATION DAY

August 19, 1939-59


RETURN THIS STUB WITH MONTHLY REPORT

1

A 1

This insurance does not cover persons under 18 or over 65 Years of age

NAME
President W Wilson

RESIDENCE
Washington DC

AGE SEX
Male

STATE WHETHER PILOT OR PASSENGER
Passenger

PREMIUM 1 00

HOUR 9 A.M.

DATE
May 6 1919

EDITION MAY 1919

The Travelers Beacon

Insurance's first flying mishap "policy" in the U. S. was issued to President Woodrow Wilson May 6, 1919, at Atlantic City.

"BY ORIGINAL scientific research the Wright Brothers discovered the principles of human flight. As inventors, builders and fliers they further developed the aeroplane, taught man to fly, and opened the era of aviation."

So reads the label on the Kitty Hawk plane at the Smithsonian Institution—the plane in which Orville Wright made history's first piloted flight in a powered airplane that memorable December 17, 1903, at Kitty Hawk, North Carolina. Orville's August 19 birthday (1871) is now the occasion for our annual National Aviation Day. But this August is notable, too, for the fact that on August 2, 1909, just 50 years ago, the Wright airplane, after being subjected to tests, was accepted by the U. S. Army.

In the first half century of the Wright-opened aviation era, the co-partnership which has developed between aviation and insurance has become one of history's classic examples of growth within the framework of a free economy.

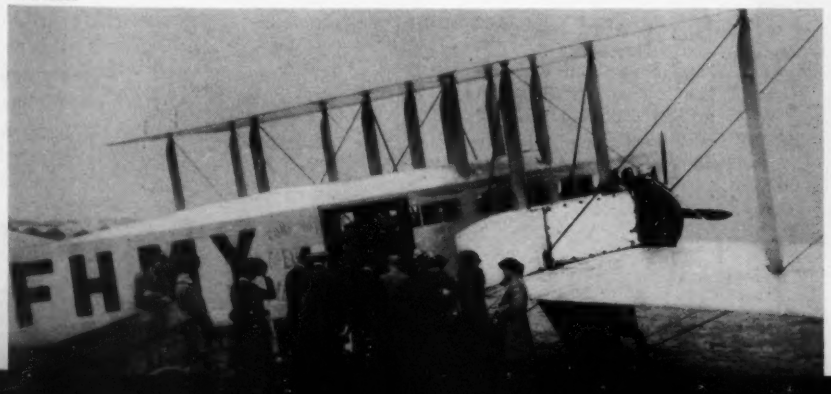
When high-altitude balloon flights marked a significant development in aviation, it was insurance which fostered them. Insurance has, in fact, offered protection to any endeavor that might advance aviation including the first all-instrument flight conducted entirely blind, the first non-stop coast to coast passenger liner flight in less than 12 hours, the first insurance for pilots in the armed forces and many others.

Insurance, protecting risk capital, made aviation financially possible. Insurance engineers and safety consultants have played a key role in helping manufacturers and operators of planes keep down losses. Insurance, for example, is credited with persuading the airlines of the wisdom of installing seat belts. Public confidence and public acceptance of air travel have become what they are partly because of the impetus given to air travel by the personal accident and life insurance companies.

History's earliest record of a policy is in 1910, when an underwriter of Lloyd's of London assumed the public liability coverage on a specific flight. A historic date in American aviation insurance is May 6, 1919, when The Travelers Insurance Company, Hartford, Connecticut, issued the first flight trip policy at Atlantic City, New Jersey, for accident insurance on a group of prominent government and aviation officials including President Woodrow Wilson.

Insurance was even a phantom passenger riding with Orville Wright when he made that first powered flight at Kitty Hawk in 1903. There was no aviation insurance as such at the time, but had Wright died in his history making venture, his personal life policies, insurance men say, would have been honored by the company. ⊙

Air France



What is now the Air France airline made history's first commercial international flight, Paris to London, in February, 1919.

Boeing Airplane Company

→ Historic Boeing B-1 flying boat carried nation's first privately contracted airmail in year of first U. S. aviation insurance policy, 1919.

← Pan American World Airways' famed Clippers were first commercial transoceanic aircraft. PanAm predicts '59 record in global air travel.

Douglas Aircraft Company, Inc.

← Best known aircraft of pre-space era is probably the venerable Douglas DC-3, used world-wide by the military, airlines and business firms.

Douglas Aircraft Company, Inc.

→ President Eisenhower became first U. S. chief executive to fly in a single-engine plane, a helicopter used in '57 civil defense maneuver.

← World's fastest piston-powered transport, the Douglas DC-7, forecast jet age with first non-stop service Los Angeles-New York in 1953.

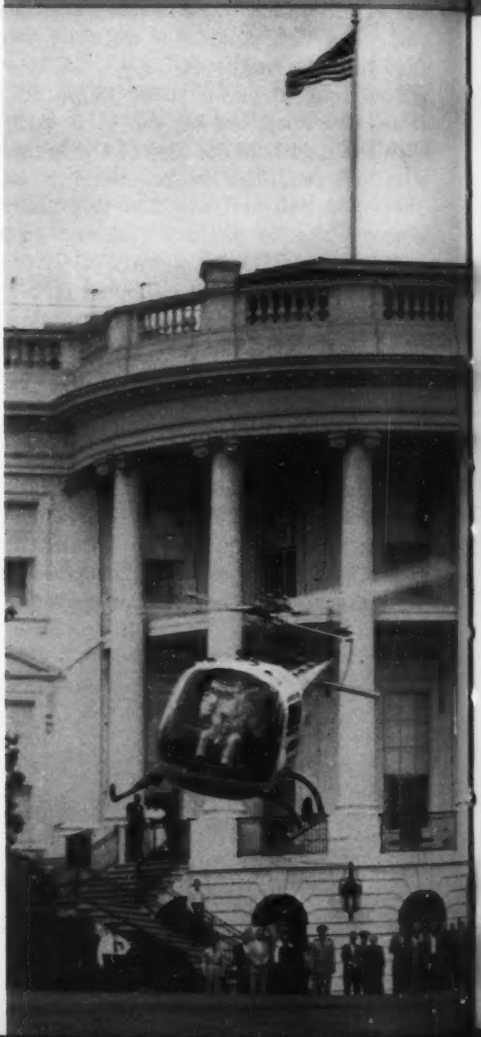
Piper Aircraft Corporation

← Piper Super Cub and sister light planes are being put to new industrial uses rapidly, handle jobs from crop dusting to pipe line patrol.

Boeing Airplane Company

Insurance has given wings to a half century of aviation progress.

Bell Helicopter Corporation



PRELUDE TO SPACE POLICIES

Douglas Aircraft Company, Inc.

Scheduled for service late this year, Douglas DC-8 jetliner is in 600 miles-per-hour class that will set air travel standard for next few years until Mach 3 (2,000 mph) jets arrive.

JET PLANES of 2,000-miles-an-hour speeds are on the drawing boards. "Slowpoke" models of 600 miles an hour are already common in U. S. traffic patterns.

And what may be the first inquiry into insurance policies for outer space passengers has been received from an earth-bound Midwesterner by the mutual industry's Prudential Insurance Company.

From the days of the Wright brothers, each new ascent in aviation's rocketing rise as a national transportation giant has been undergirded by insurance. Today, aviation insurers are providing property protection for a business which will spend some $4 billion on new transport aircraft alone in the next few years. Even more staggering are the liability coverages developed in a field that has always created uncommon problems with its built-in catastrophe hazard and rapid technological advances.

"The next few years will be one of the most trying periods in the history of aviation insurance," says Woodrow J. Van Hoven, vice president of United States Aviation Underwriters, Inc. The addition of jet and turboprop transports today means marvels in speed and payloads but a risk picture of unprecedented dimensions.

Dramatic evidence of the size of loss possible with jet-age aircraft was provided by the tragic Electra crash with 65 deaths in New York last winter. More than $5 million in property, accident and life insurance claims have been recorded as a result of that accident, with several millions in liability claims also involved. "It is inconceivable," says one long-time flying observer, "that commercial aviation, without the partnership of insurance, could ever have reached the day when it could put such an investment and payload into the air."

The jets, world-shrinkers and could-be peace promoters, are here to stay, joining the piston-driven liners, helicopters, business craft, and small planes that share the nation's airspace with the military on about a 60-40 basis. And along with protection in the air and for the maintenance, training, storage and service facilities that fan out from flying in all directions, insurance representatives are intently preoccu-

The Timberman

Aircraft are playing a growing part in protecting the nation's forest lands. Forest Service units fly patrols, direct fire fighting from Cubs, while crews get into threatened areas fast via Beechcraft twin-engine smokejumper planes and chutes slotted for deft control.

Beech Aircraft Corporation

pied with the safety problems attendant to the expanding facilities of the U. S. aviation plant.

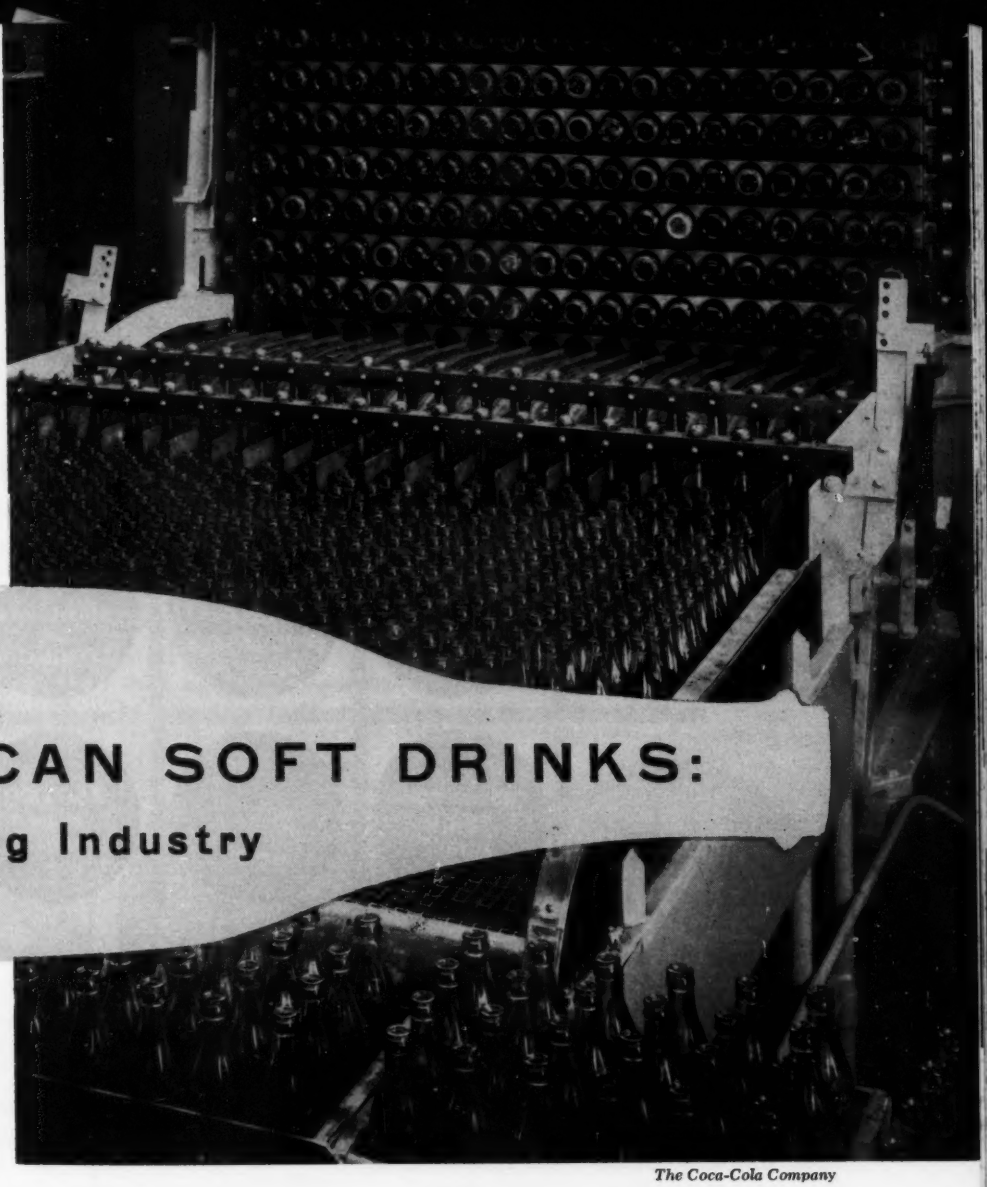
Here there are problems to be solved, and not only in learning how to run a 600-miles-per-hour air service. The nation's 6,000-plus airports, serving some 70,000 American aircraft of which only about 2,000 are scheduled airline planes, offer room for considerable improvement. The National Fire Protection Association, viewing inadequate civil air facility fire crash safeguards, says the situation is of "an urgency unparalleled in the history of air transportation."

How far afield air travel's insurance and protection implications reach in this jetstream era was demonstrated by a recent American Medical Association announcement. An expert in the control of infectious diseases pointed out, "In this era of jet travel, a medical problem in Madras, India, today may be that of New York City tomorrow."

What new problems will arise following the scheduling of the first spaceliner remains to be seen. But the first space insurance customers—the seven military pilots picked for space flight training—are already in sight. ⊙

Soda pop may be a hot weather trademark, but it's also a hotly-competitive, booming all-year business.

AMERICAN SOFT DRINKS:
A Sparkling Industry



Returnable bottles — cost savers and sometimes the "Achilles heel" of the industry — are automatically sanitized before refilling.

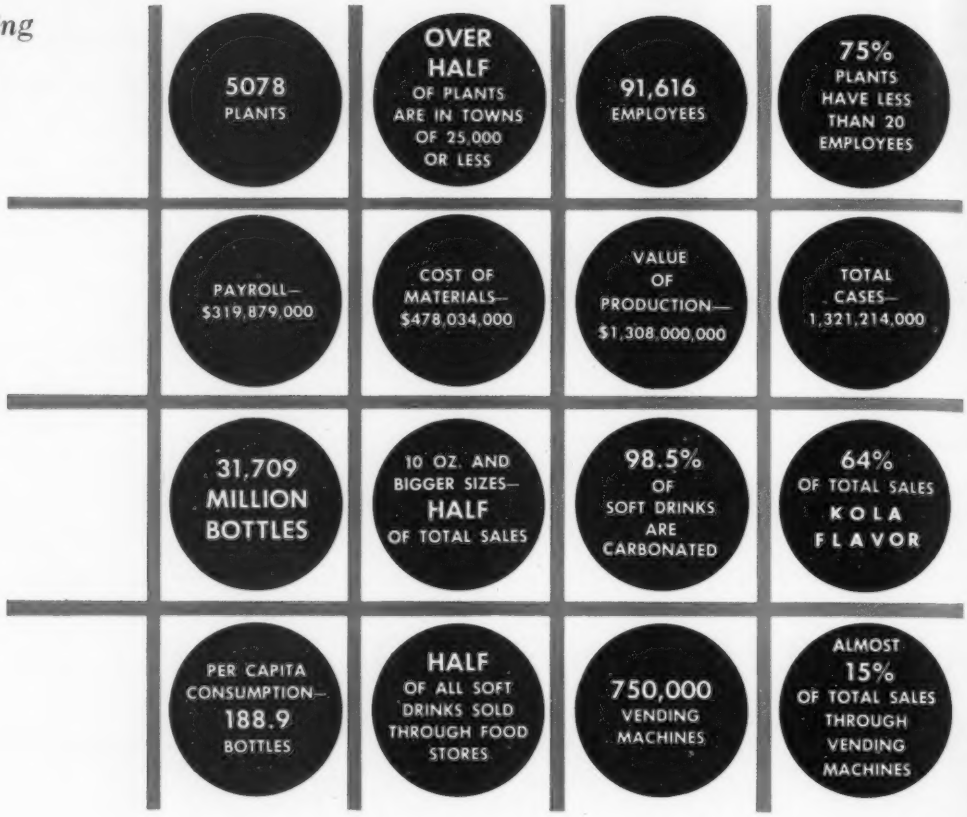
The Coca-Cola Company

"A TYPICALLY American industry." That's what U. S. soft drink bottlers call their business. It is typically American "big"—some billion and a half cases of pop this year—but the slogan is based on something more than that.

The industry's 5,000-plus plants are scattered throughout more than 2,000 communities, the majority in towns of less than 25,000 population. Largely local operations, three-fourths of all plants have fewer than 20 employees. With 50,000 delivery trucks and an annual production of 32 billion bottles featuring some 100 different brands, soda pop is reaching new highs in ubiquity; still, well over half (54 per cent) takes a familiar American sales path, the grocery shelf.

And in a vein common to American businesses large and small, soft drink manufacturers have long made broad use of insurance services to protect their investments, employees, customers and communities.

A Sparkling Industry


5078 PLANTS
OVER HALF OF PLANTS ARE IN TOWNS OF 25,000 OR LESS
91,616 EMPLOYEES
75% PLANTS HAVE LESS THAN 20 EMPLOYEES
PAYROLL— $319,879,000
COST OF MATERIALS— $478,034,000
VALUE OF PRODUCTION— $1,308,000,000
TOTAL CASES— 1,321,214,000
31,709 MILLION BOTTLES
10 OZ. AND BIGGER SIZES— HALF OF TOTAL SALES
98.5% OF SOFT DRINKS ARE CARBONATED
64% OF TOTAL SALES KOLA FLAVOR
PER CAPITA CONSUMPTION— 188.9 BOTTLES
HALF OF ALL SOFT DRINKS SOLD THROUGH FOOD STORES
750,000 VENDING MACHINES
ALMOST 15% OF TOTAL SALES THROUGH VENDING MACHINES

"Soda water" first appeared as a commercial American operation in the same environs where Ben Franklin's genius generated the mutual insurance industry 55 years earlier. In Philadelphia, in 1807, Joseph Hawkins opened his prototype soda water dispensary. Two years later, Hawkins obtained the first U. S. patent for preparing artificial mineral water.

Early steps in soft drink public approval date from 1807 too, when Dr. Philip Syng Physick (1768-1837), sometimes called the "Father of American Surgery," provided Hawkins with a certificate of the efficacy of his products. Physick also was "inspecting physician" for Hawkins' Mineral Water Association, thereby serving as the first in a long line of quality control experts who, these days, have been joined in their work by electronic equipment carefully designed to spot the tiniest bit of foreign matter or irregularity in bottled beverages.

The pride—and occasionally the despair—of today's soft drink business is the returnable glass bottle. It has made low unit-costs possible but has posed vexatious problems for insurance and bottled beverage men concerned with safety and protection.

The re-usable bottles, governing much of the financial, manufacturing and distributing structure of the business, are destined to be with us at least until "the consumer is willing to pay about 3 cents more per drink," says one industry spokesman. At present, fully 95 per cent of all soft drinks are so packaged. Among inspection personnel and case packers, glass-provoked cuts, lacerations and punctures have led the accident list in the workmen's compensation experience of insurance firms servicing the industry.

Spurred by the fact that soft drink injury-frequency was running nearly 70 per cent higher than the all-manufacturing average, bottlers two years ago kicked off an intensive attack on common accident problems through their national association, the American Bottlers of Carbonated Beverages, and in cooperation with the National Safety Council. The long-range

campaign is still in the early stages, but the NSC rates the industry high among those engaged in the Council's extensive Small Business Program.

Backing up bottlers' efforts toward employee and public safety, insurance firms have provided workmen's compensation, automobile, property and other coverages, as well as an increasing number of group life and health plans for plant personnel, made available at lowered costs both through major franchise companies and state bottlers associations.

Perhaps the most important insurance safeguard required by soft drink groups has been product liability coverage to protect firms against damage claims resulting from alleged foreign substances in drinks, glass breakage, vending machine failures and other "occurrences." In addition to coverage through policies obtained by their national franchisers, local bottlers, their dealers and distributors have special product liability protection available today in a program worked out by the ABCB and insurance industry representatives. The plan is considered unusual because of the limits provided for bodily injury claims and the breadth of coverage, which includes loss of business and property damage liability.

Many small pieces make up the American bottling picture. But added together the result is a major industry, high on the national food processing list in value of production, yet typically small business in its community-oriented, insurance-outlined profile. ⊙

Though number of plants has dropped slowly from 1929 high of 8,220, 1959 plants make five times as much pop.

The Coca-Cola Company

Visual inspection precedes filling operations. Inspectors alternate duties with other jobs to avoid eye fatigue

Electronic "eye" checks filled bottles for foreign ingredients, automatically shunts suspects off conveyor belts.

Three photos American Bottlers of Carbonated Beverages

The Coca-Cola Company

Automation is an old friend of soft drink bottlers. Efficient plants of today are one-floor operations with automatic casing, removal for loading.

Though back injuries common to industry have been cut through wide use of lift trucks, pop case transfer to skid platform still poses strain problems.

The Coca-Cola Company

With domestic distribution no longer a problem, soft drink men after foreign markets are finding profits in pop from Lebanon to Latin America.

PORT ANGELES:

Rogers Studio

First Port of Call for Fire Safety

SANDWICHED BETWEEN the Pacific and 888,000 acres of mountain wilderness is Port Angeles, Washington, "Gateway City to the U. S.," in America's great Northwest. It has just 12,000 people, 12 major businesses and industries, 12 fulltime firemen. Yet twice in the past three years Port Angeles has been national grand winner in the U. S. Chamber of Commerce's annual Inter-Chamber Fire Safety Contest, outranking cities of all five larger population classes in the depth and extent of its "safety saturation" campaign.

Awards in other fields also attest to the pervasiveness of the city's safety efforts—in traffic and pedestrian safety, school safety, firearms safety training, safe operation of police vehicles, industrial safety.

But the national recognition for fire safety from both the Chamber and the National Fire Protection Association, reaching back over 24 consecutive years, is Port Angeles' particular pride and joy. Residents' continuing efforts to make their city fire-safe have brought them not only honors, but fewer fires, fewer deaths and injuries, lower property losses, lower fire insurance rates. Annual per capita losses have exceeded $4 only once in the past 25 years; in 1958 the figure was $2.42, far below the $6 to $8 national averages of recent years—and this in a forestland community suffering the most dangerously tinder-dry fire season in the history of the state.

Community-wide cooperation is the key to this fine record—the same sort of cooperation that brought Port Angeles an All-America City designation in 1953. Here are some of the aspects of the fire safety program:

¶ Fire prevention training starts early. Last year a new batch of 600 second graders joined "Sparky's Fire Department," and had basic safety rules drummed into them on personal visits to the fire department. Fifth graders, also 600 strong, became "junior fire marshals." And all through the elementary grades, pupils prodded parents into helping them check and correct home fire hazards for the twice-yearly home inspections. Last year, of 3,000 inspection blanks sent home, nearly 100 per cent were returned. Fire Chief C. A. Wolverton credits this program, held during Fire Prevention Week in October and again during Clean-Up Week in the spring, for a continuing decline in home fire calls.

¶ Port Angeles industries are fire-careful, too, as they must be in this timber-lush territory that makes its living from its logs. Eight of the 12 major firms, including several huge pulp paper and wood products plants, maintain their own fire defense services and train their employees in fire control. Several have won statewide honors for their safety programs. Two will completely rewire their fire alarm systems this year, with the cooperation of the fire department.

¶ Water and alarm systems are being constantly improved. Cast iron replaced wooden water mains last year; 20,000 feet of new alarm wire and three master alarm boxes will be added to the city's system this year. All but one of the schools and major industries have their alarms directly connected to the fire station, a safety measure strongly urged nationally since the 94-death Chicago school fire last December.

Port Angeles' alarm system, which also covers the hospital, nursing homes and public buildings, has involved installation of 13 miles of special wiring so far. It is "far in advance" of

latest national recommended standards, Chief Wolverton says, and it's been operating for 19 years.

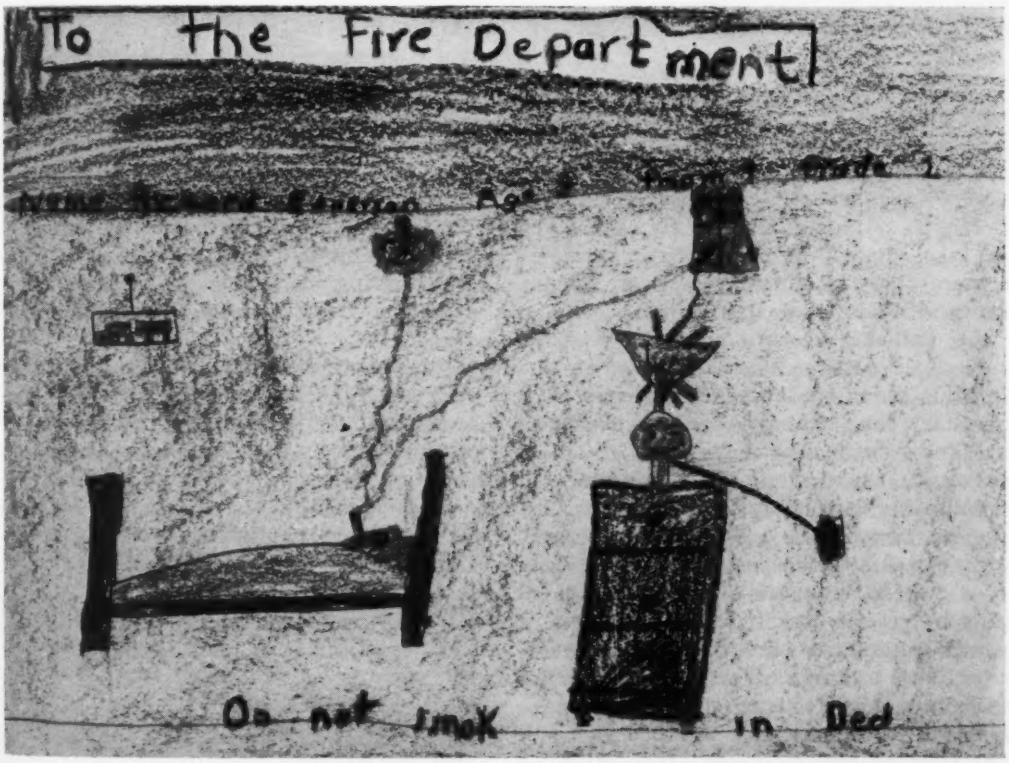
¶ School inspections were upped from two a year to one a month after the Chicago tragedy. Northwestern Mutual Insurance Company also makes annual inspections, and its recommendations are complied with as quickly as possible. Twelve of the district's schools are one-story, incorporating maximum fire and earthquake-resistant features; the two-story schools have separately-housed or fireproofed furnace rooms for safety.

¶ Firemen, 12 fulltime and 22 volunteer, are well trained. Even the volunteers average more than 100 hours of drill-school training, and members attend state and regional fire schools, arson and now atomic industry hazard courses.

¶ Keeping Washington Green is no slogan, but a serious annual crusade. The state has lost an average of 26,000 acres of forestland a year for the past 20 years. Port Angeles residents helped keep the Olympic peninsula's loss down to 27½ acres last year by burning trash and brush only by permit from May 15 to October 15, reporting cigaret-flipping motorists to the state highway department and teaching campfire safety rules to Scouts and schoolchildren.

¶ Playing safe with Christmas decorations, Fourth of July fireworks and other fire and injury-producing agents are other publicity-propelled pleas of Port Angeles firefighters. Posters, bumper cards and the cooperative peninsula press help promote these projects and others: rescue and resuscitation instructions, civil defense planning, farm and home accident prevention, for example. Firemen gave some 85 lectures and demonstrations to clubs and children last year too.

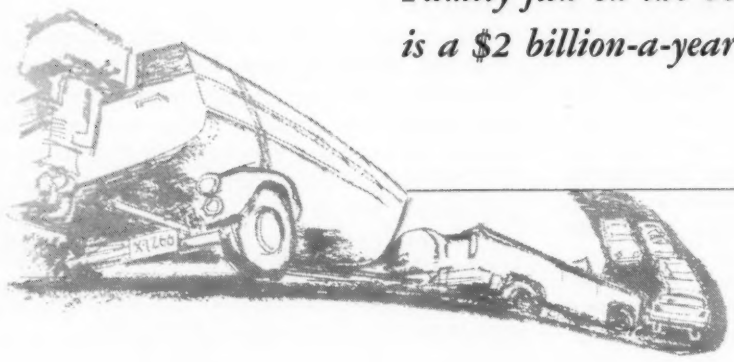
Where "safety saturation" is involved, it's easy to see how Port Angeles wins prizes. ⊙



Danger of smoking in bed, cause of city's lone 1958 fire fatality, was impressed on second-graders touring fire department. Their posters, like this, helped persuade some adults to quit.

BIG BOOM IN BOATS

Family fun on the bounding waves is a $2 billion-a-year business.



A TELEVISION COMIC recently advised his audience not to worry about a shortage of parking facilities around their favorite lakes or rivers. "Just wait till about noon," he counseled, "and then drive right out and park on the boats."

Though somewhat less than practical, that advice succinctly sums up the boat situation. While industry officials glow happily over the sales charts, 37 million enthusiasts have taken to the lakes. Sales this year will run considerably more than $2 billion for boats, motors, trailers and related equipment and services, and put the nation's pleasure boat total in the vicinity of 7.5 million craft.

Why this boom in boats? Among noteworthy factors have been insurance services developed to meet the growing boat clan's needs. Property coverages to back up family investments in boat fun, along with liability protection against unforeseen accidents, have given added incentive to the would-be weekend skipper. "Insurance is widely available and very much in demand by private boaters," says an official of the Outboard Boating Club of America, spokesman for 27,000 boaters and including nearly that many more marine dealers and outboard manufacturers in its membership.

A number of other reasons also lie behind the mass mania for marine kicks, according to the National Association of Engine and Boat Manufacturers, Inc., trade association whose 360 members represent inboard, outboard and sailboat divisions of the industry. Among them: the creation of scores of man-made lakes, which have put many once-landlocked areas practically "on the beach." Other factors include stepped-up production of small, low-cost outboard units, the family nature of the sport and the side pleasures that fall to the fan including water-skiing, swimming and fishing. Excellent consumer credit facilities also have helped the trend along.

Variety is the watchword in the boating business today, but outboard rigs account for more than half of all craft afloat. Most popular size in the division is around 14 feet, with a tab of

American boating spree has helped zoom sales in sister industries such as skin-diving and water-skiing. Among latest waterway innovations: a credit card for boaters' use only.

Outboard Boating Club of America

Kiekhaefer Corporation

U. S. boat panorama 1959 includes a myriad of marine styles, a trend to two-boat families and a growing list of amateurs at the helms of high-powered craft. A federal law one year old this month will aid in pleasure boating safety, put most craft under Coast Guard control unless states set up their own licensing systems by next April. So far, 19 states have.

about $600. Skilled workers head the list of customers who burn some 276 million gallons of gas a year joy-riding at much better mileage figures than they ever enjoyed when the highways still had room for pleasure drivers. Motor sales this year should hit 600,000.

Fanning through all this watery fun is a tragic ripple provoking intensified efforts by insurance, industry, governmental and safety groups alike. Though a lack of centralized records makes accurate forecasting impossible, too many persons will be killed and injured in boat accidents this year. One positive note, however, turns up in a study made by the OBC. Though outboard motors alone have doubled in use in the last decade, the number of boating drownings as reported by the National Office of Vital Statistics has remained relatively constant. Still, around 1,200 persons a year drown in small boat accidents.

What's the newest headache in boating today? Someplace to "tie up." With hard-pressed facilities getting more crowded by the hour, NAEBM Secretary Joseph Choate figures the problem is costing the industry 2 million boat sales. Meanwhile, enterprising souls are out spotting locations for new "marinas," the boating equivalent of the superhighway's one-stop service center. "If you want to get into a fast-growing small business with a future," says an OBC spokesman, "find a likely waterway and open your own boatstop. You can't miss." ⊙

HERE'S AN HONEST

Distribution of workmen's compensation insurance premiums

FOR WORKMEN, EMPLOYERS AND TAXES

Workmen's Cash Benefits

Benefits must be paid in full—and promptly—as fixed by law in the various states for the relief of injured workers and dependents. It is also the duty of the carrier, whether insurance company or state fund, to maintain the payments regularly until the case is closed.

Loss Prevention

Both employer and employee benefit here, the former by lower premiums based upon favorable experience rating and fewer costly absences of injured workers, the latter by accident-free employment, meaning steady work and pay plus protection of body and health.

Taxes

Insurance companies, in general, are subject to state premium taxes, filing fees, licenses and fees for agents. Many states also require contributions to various funds. Municipal and state income taxes are required of some companies. Federal income taxes are included.

Dividends, Premium Discounts, Rating Credits

Mutual casualty companies usually operate under standard rates. By good management and efficient loss prevention, the mutual casualty companies operate for less than the original premiums, returning the savings to their policy-holding employers as dividends.

Taxes, Including Fe
3.38c of each
Total: $32,9[illegible]052

Loss Prevention, Safety Engine
2.51c of each $
Total: $24,433,583

Workmen's Cash Benefits
(Indemnity, medical and rehabilitation)
61.4c of each $
Total: $596,985,892

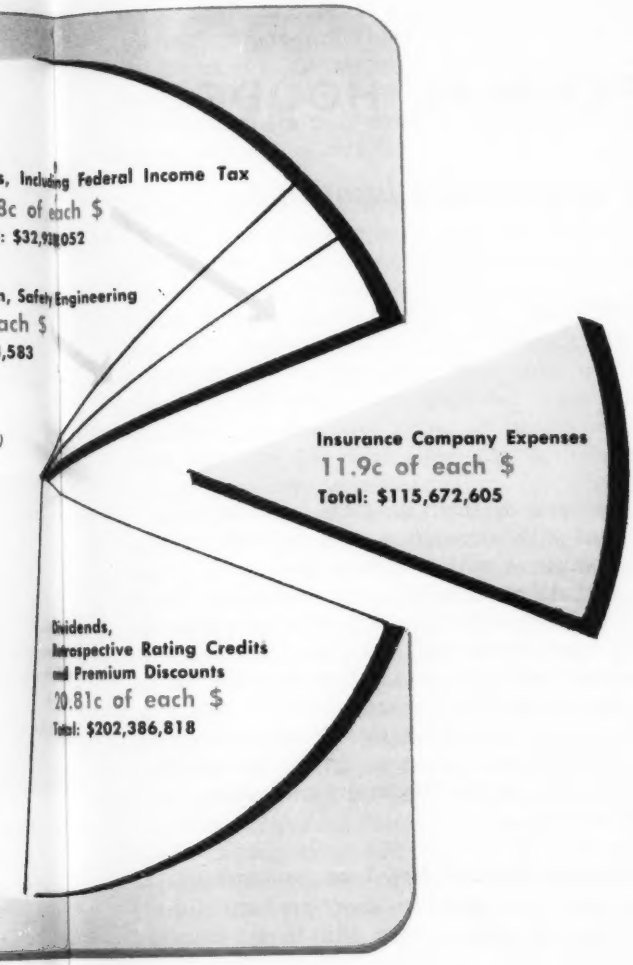
Dividend
Retrospec
and Prem
20.81c
Total: $2

EVERY STATE in the U. S. has a workmen's compensation act providing a certain amount of medical and hospital care for the injured worker, certain money payments partly to take the place of his wages while he is unable to work, and specified amounts to be paid his dependents if he is killed. Many of the state laws also contain some provision for the rehabilitation of injured workers.

Insurance or other security in providing for the payment of compensation benefits is required in all states, either by a private insurance company, by self-insurance, by insurance in a competitive state fund or by insurance in a monopolistic, or "exclusive," state fund.

Cost of workmen's compensation insurance in private insurance companies is often misunderstood and occasionally misrepresented, owing to the intricacies of rate making. To correct those misunderstandings and misrepresentations, here

ST DOLLAR



are the actual workmen's compensation operating statistics of eight large mutual casualty companies for a three-year period, 1955-1957.

Workmen actually get 80 per cent out of the used portion of the dollar. They get 61.4 cents in cash benefits and 2.51 cents in loss prevention and safety engineering for a total of 63.91 cents out of the dollar's 79.19 cents used portion available after dividends, premium discounts and retrospective rating credits.

INSURANCE COMPANY EXPENSES

Policy Costs

Policies are essential "paper work" in the efficient management of workmen's compensation insurance. Renewals, revisions add to original cost of policy writing.

Selling Expenses

Selling expenses of the business are a legitimate and integral part of workmen's compensation, the same as claims, accident prevention, other insurance services.

Salaries, Rental

Only an efficient, well-staffed and well-trained insurance office can handle the complex workmen's compensation procedure in effect throughout U. S. industry today.

Payroll Audits

Payrolls must be expertly audited regularly for accurate premium computation. Insurance rates for individual employers are calculated on basis of each $100 of payroll.

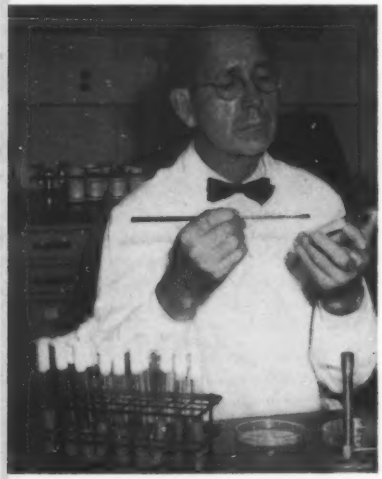
Premium Handling

Premium collection and distribution are no less important in the efficient management of workmen's compensation insurance than is the essential payroll auditing.

Other Functions

Maintaining actuarial and rate-making bureau services are among other required insurance functions for prompt and efficient service to employers and workmen.

FOOD POISONING—PERENNIAL HOODOO



Clues to troublesome food poisoning worries may come from Dr. Dack-directed research, supported partly by mutual insurance.

Its panic is countered by protective insurance.

By Dr. G. M. Dack

Director, Food Research Institute
University of Chicago

BACHELORS, of all people, are probably most famously vulnerable to food poisoning.

Their fame has gone down in English history where it is recorded that up to 1840 an English bachelor could buy a policy for five shillings per annum that would insure him against being poisoned by his cook. Married men, on the other hand, who wished to insure themselves against being poisoned by their wives, were not eligible for such coverage.

Food poisoning, indeed, is as old as the recorded history on "corrupt food and drink." And new chapters are being added every day. One of the most recent widely publicized cases occurred on a Washington-bound Toledo train when more than 100 conference delegates became ill several hours after eating a turkey dinner later proved to be contaminated with *Clostridium perfringens* bacteria.

Victims of food poisoning of one kind or another number into the several hundred thousands every year. The term, as commonly used, includes all illnesses in the wake of eating food. It may be food contaminated with pathogenic bacteria or their products, or food contaminated with nematodes or fungi, with poisonous plants or with chemical poisons.

In fact, chemical poisons are responsible for one of food poisoning's most famous episodes—the one which led to the development of "poison insurance," now known as food products liability insurance. Lloyd's originated it after a London baker's apprentice, mistakenly or otherwise, sprinkled rat poison instead of powdered sugar on pies to the discomfort and agony of the pie eaters.

Food Problem Required New-Type Insurance

This type of insurance—food products liability—was introduced into the U. S. about 1920, shortly after Americans had seen the end of the "wheatless," "porkless" and "meatless" days of World War I. It has since grown rapidly. Its growing importance is partly explained by the fact that since about 1946, courts have tended to hold food producer, seller and server all liable, so all need insurance. In fact, tainted food, foreign matter in food, or overseasoning can cost the owner or operator of an eating place as much as the collapse of his building. Restaurants report far more claims for bad food than for falls on the premises, spilling mishaps and other complaints.

To the credit of the dining public, impure food claims are seldom fraudulent, although

often imaginary. If only one becomes ill and blames the food, there is little, if any, basis for a claim if it can be shown the same food was served to many others with no bad effects.

When cases of "outbreak" proportions do occur, they may set off a long chain of consequences. There are complicated medico-legal questions. Claims may be made against the food processor, the supplier or the server. In some case there may even be questionable, if not fraudulent, claims.

One Baked Ham, 240 Guests, But 276 Claims

There is a recorded ham case, for example, in which the supplying company carried $50,000 product liability insurance. Unfortunately, 240 people became ill from eating the baked ham. But more unfortunate for the insuring company were the claims put in by a total of 276 people, all of which were paid for a total of $22,575.59. Where the extra 36 people came from and how they were injured by the offending ham was never explained.

Of more concern to the public and to insurers are the new problems arising when eating or living habits change. Pre-cooked frozen foods, for example, have gained wide popularity as the last word in convenience, nutrition and uninterrupted TV viewing. Yet such foods, too, may be carriers of food poisoning unless strict microbial standards, calling for new techniques, are enforced.

We are attacking some of these newer problems through such cooperative projects as the Staphylococcus Food Poisoning Research Project at the University of Chicago. In this we have the financial support of the National Association of Mutual Casualty Companies, plus the support of more than a score of concerns in the food industry.

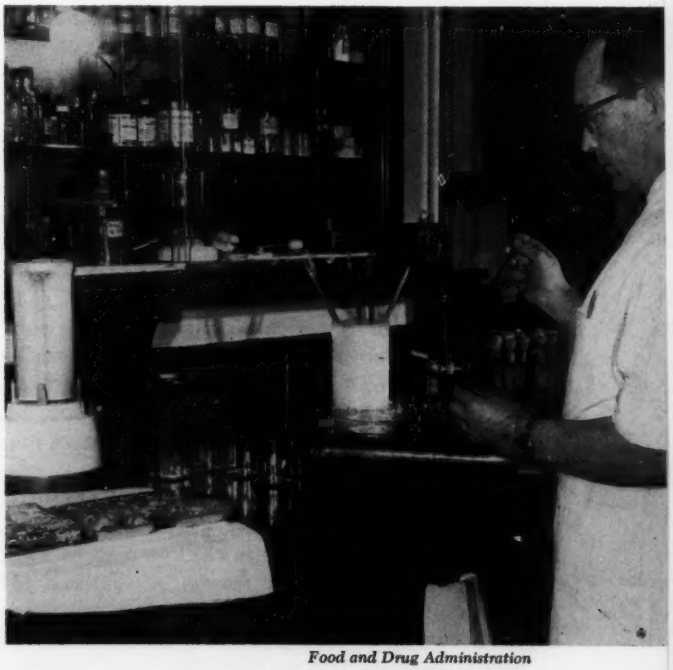
When our grandmothers grappled with the problem, it was "bellyache," although not all bellyache is food poisoning. "Gastroenteritis," with modifications and qualifications, is a general term. But don't be misled by "ptomaine poisoning." This is a meaningless and incorrect term frequently applied to outbreaks of food poisoning. Most ptomaines are harmless. The best example is ripe cheese, such as limburger, which is full of ptomaines, yet is wholesome and nutritious.

The troublemakers in the majority of food poisoning outbreaks are specific microbial agents. This microbial food poisoning is of two types: (1) when toxins are produced by bacteria growing in food before it is eaten, and (2) when living organisms are present.

In the first type are botulism and staphylococcus food poisoning. In the second type, where living organisms are involved, the most important group is Salmonella. Milder illnesses are caused by several other types of living organisms, such as alpha-type streptococci, *Clostridium perfringens* and *Bacillus cereus*.

It is to the credit of science and modern food handling methods that the toll from food poisoning in terms of lives, suffering and millions of dollars isn't higher than it is. For the offending organisms are abundant and widespread. They are literally everywhere. Man, himself, is the most important source and spreader of toxigenic staphylococci, for example. The commonest reservoir is the human nose. A close second is the skin. Minor abrasions may teem with the cocci, with the result that many outbreaks can be traced to the hands of food handlers.

But what is true in one case may not be true in another. In fact, no two outbreaks of foodborne poisoning are the same. That poses



Food and Drug Administration

Frozen meals may cause food poisoning if processing and handling are faulty. This is a test for suspected bacteria.

special problems. An investigator often has but one opportunity to collect his all-important evidence or facts. Soon the food may be consumed or discarded. The persons involved may be scattered or may forget pertinent facts.

To make matters still worse for insurers and the public, some of our most popular food items are among the most common of the many foods that may harbor microbial food poisoning, especially staphylococci. Ham, layer cakes, cream and custard pastries have been involved. Other meats, bakery products, poultry, potatoes and milk or milk products may purvey staphylococci. Gelatin is a superb medium, with the result that glazed articles, such as pressed beef, are particularly dangerous.

Public Functions Pose Special Problems

Long-popular public functions—church suppers, school picnics and smorgasbord spreads—are hot spots for food poisoning outbreaks. Community feeds, school picnics and other events put on by non-professionals in mass feeding are poor risks for the public, the food industry and insurers, mainly because of the lack of proper equipment and proper know-how. Public health officials, food industry experts and loss-prevention specialists of the insurers might well unite in some helpful public service on these church and school affairs.

As for smorgasbords, they are such a poor risk on the food-poisoning score that many restaurants have outlawed them. One executive of a national restaurant chain brands them "ptomaine tables."

Popular and common beliefs offer no relief or protection. Food poisoning is not, as commonly believed, rare during the winter months. A relatively high number of cases occur throughout the year. If cool or cold weather puts too many people off guard, the number of cases may go up. Likewise, pasteurization does not prevent food poisoning outbreaks if the causative products are subsequently carelessly handled. And if anyone thinks he is keen enough to avoid food poisoning by sight, taste, or smell of the morsel, he is about the worst risk an insurance company could have in its product liability business. There just isn't any warning that is dependable.

The best insurance against microbial food poisoning—and the strongest forte for insurers, the food industry and the public alike—is a thorough knowledge of the sources and modes of microbial food poisoning agents, coupled with the proper refrigeration of foods or adequate thermal processing to avoid multiplication of these microbial agents.

Negligence the Major Pitfall in Liability

Conversely, according to competent legal authorities, insurers and the food industry are vulnerable so far as claims are concerned if one or more points can be established: (1) a defect in manufacturing or processing procedures, as such; (2) negligence in conception or design; (3) negligence in labeling; (4) negligence in the formulation of directions, or (5) failure to warn.

Always, it is well to be forearmed against what Mr. Justice Frankfurter cited as "the readiness of juries to amerce insurance companies." Thorough understanding of the common types of bacteria causing food poisoning is a "must" weapon in getting forearmed. Beyond that, legal experts on the subject tell us that important facts to develop are: (1) the condition of the product when it left the possession of the processor; (2) the care and handling it received thereafter in the hands of the retailer and the consumer; (3) the history of the illness-symptoms; (4) other articles of food eaten in the 72 hours preceding illness, since it is not always the last food eaten which causes food poisoning nor is it the food vomited; (5) others eating the processor's product involved in the claim.

Molds May Be Odious But Not Food Poisonous

On the accompanying page there are summarized the essential facts about the various types of microbial food poisoning, the foods usually involved and the preventive measures that should be taken in each case to guard against trouble.

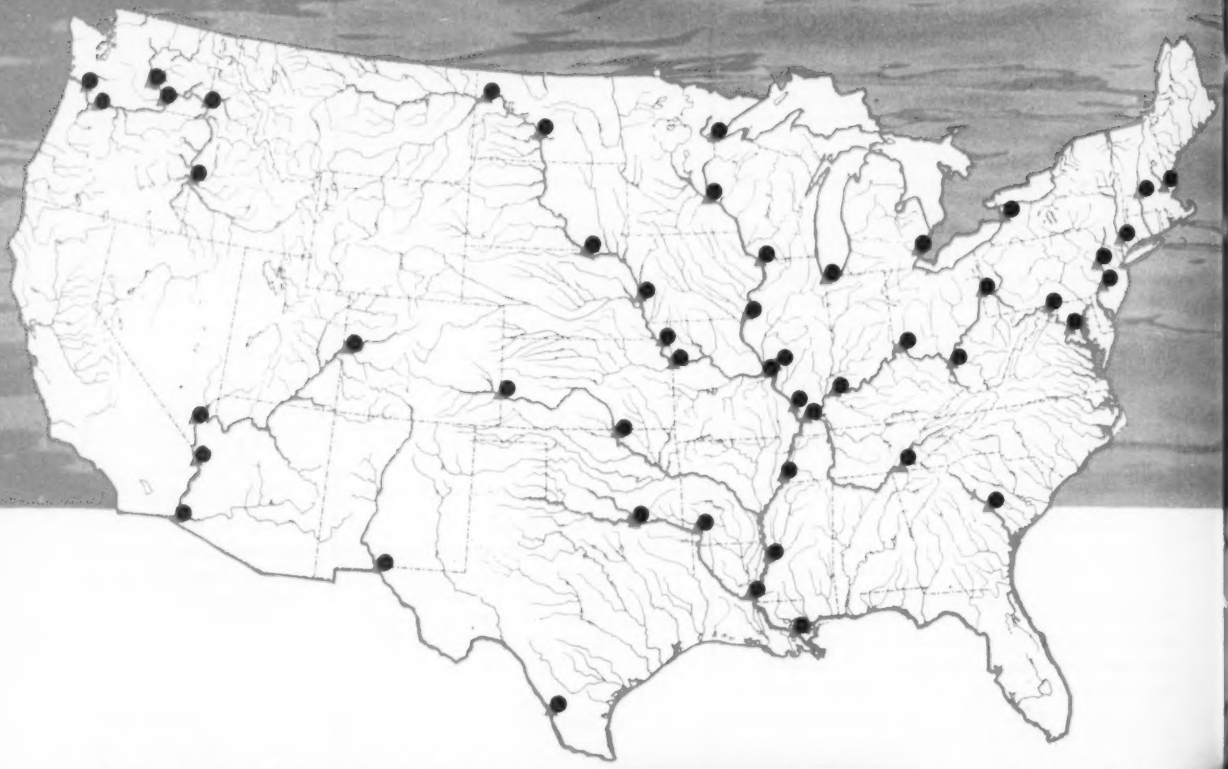
One final and reassuring point can be made without any qualification. No food concern nor its insuring company will ever have to make a food poisoning settlement because of molds growing on foods. Those molds may be unsightly on some products, but they are not toxic-forming and not a single case of food poisoning has been proved to be caused by molds. In fact, they are highly desirable in some foods, as witness Roquefort cheese. ⊙

Food Poisoning Fact Chart

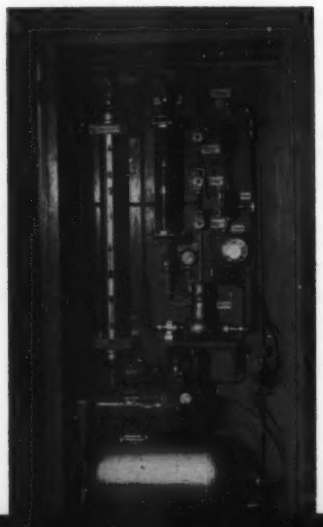
Food poisoning, especially these microbial types, may occur under a wide range of circumstances, as indicated here, but most of the risks and hazards in discomfort, illness, product liability and public liability can be avoided by cleanliness, thorough cooking and proper refrigeration.

TYPE	FOODS USUALLY INVOLVED	PREVENTIVE PROCEDURES
STAPHYLOCOCCUS		
The most common type of microbial food poisoning reported in the U. S. It traces to food contaminated by sores, boils and nasal discharge. Organisms can grow in foods partially preserved with large quantities of salt or sugar. Symptoms are nausea; emesis; shocks; diarrhea; absence of rise in temperature; absence of increased heart action. In severe cases there may be prostration.	Cooked ham; salads of protein-food; custard pastries; potato salad; Hollandaise sauce; "warmed over" foods. Onset of illness is within two to four hours.	Cooking foods thoroughly; refrigeration of moist foods during storage periods; reheating of custard pastries.
BOTULISM		
Caused by Toxins A, B or E of *Clostridium botulinum*, which lives in the soil and produces heat-resistant spores which may survive inadequate processing time and temperature. Symptoms involve the nervous system and include constipation; loss of muscular control; paralysis of central nervous system. Mortality is approximately 65 per cent in U. S. reported cases.	Inadequately canned foods with pH higher than 3.5. Low-acid, underprocessed, home-canned foods from time to time cause family outbreaks of this type illness. Onset is within 24 to 48 hours.	Pressure cooking in processing foods; cooking foods thoroughly before serving.
ALPHA-TYPE STREPTOCOCCI; *Cl. perfringens; B. cereus.*		
All three of these organisms have been associated with food poisoning of a type in which large numbers of organisms are required before illness occurs. There is little vomiting, the patients are afebrile and the symptoms are characterized mostly by nausea, abdominal cramping and diarrhea. The onset may vary from 6 to 15 hours. Acute symptoms last only a few hours; usually within a day's time all patients are well on the way to recovery.	Alpha-type streptococci—Vienna sausage; charlotte russe; barbecued beef; ham; bologna; turkey dressing; chocolate pudding. *Cl. perfringens*—meat stews; turkey. *B. cereus*—vanilla pudding.	Thorough cooking; refrigeration during storage and holding periods.
SALMONELLA		
This is an infection-type of food poisoning, as differentiated from the toxin types of staphylococcus and botulism. There are some 200 types of Salmonella organisms of variable potency. The number of living organisms ingested determines whether illness will occur. Symptoms include nausea; abdominal pains; diarrhea; slight fever; slight vomiting. The onset occurs in from 6 to 48 hours.	Poultry salads; poultry dressing; duck eggs; "warmed over" foods; commercial baby foods; frozen or dehydrated egg yolks or whites; meringue; baked Alaska; turkey; ice cream; potato salad; custard; roast beef and ham.	Thorough cooking of food; strict personal cleanliness in food preparation; refrigeration of moist foods during storage periods.

TEMPEST IN OUR WATER



Public Health Service's 51-station national water quality network collects samples of U.S. waters. Laboratory center in Cincinnati tests for presence and quantity of pollution, including chemicals, live organisms, radioactivity.



Typical testing equipment used at each of network stations. Fourteen major U.S. river basins are sampled. State, local and private agencies aid PHS by doing basic analyses of water right at the sampling sites.

Using specially adapted micro-
scope, technician at Sanitary
Engineering Center in Cincin-
nati counts and identifies the
aquatic organisms (plankton)
in water samples. Algae, other
organisms may affect safety,
taste, odor and color of water,
and operation of water treat-
ment plants. Decomposing
sewer wastes nourish algae.

Pollution—and its control: the nation's billion-dollar bugbear.

Public Health Service technicians collect samples of aquatic life present in a stream. Rain, erosion often carry pollutants from land plants and animals into water supply.

"WATER, taken in moderation, cannot hurt anybody." So Mark Twain once said. But that was long ago—before our nation's water supplies became abhorrently "bewitched."

Today, as one example, when New York City opens its bathing beaches, thousands of parents and children groan, and get ready for long, hot subway rides every time they want to swim. Four of the 14 beaches are classified as unsafe for swimming because of polluted water. Six others are approved, but subject to reclassification. Only four are called safe. The classifications have been virtually the same the past 11 years.

New York is not alone in its predicament. All over the country untold quantities of water are rendered unsafe, unsightly and smelly—unsatisfactory or actually unusable for drinking, cooking, fishing, swimming, lawn, crop or livestock watering—because of pollution. Where water is scarce the situation is especially serious. But all over, the Public Health Service warns, the U. S. can no longer afford to heedlessly waste its water by pollution.

There is just so much water available, so it must be reused. And, the PHS points out, more "new" water can be provided by controlling pollution than by any other means.

To do so, though, nearly 4,000 new municipal sewage treatment plants are needed to serve some 22 million people. Another 2,000 existing facilities, serving 30 million, need to be expanded and improved to make present treatment adequate. Although 98 million people are served by sewers, less than half the sewage receives adequate treatment, a PHS survey showed. Most communities remove only 35 to 85 per cent of the pollutants from sewage.

U.S. Public Health Service Photos

What is needed—"what U. S. cities must afford," according to the PHS—is the expenditure of half a billion dollars a year, or more, to catch up to present needs and meet the increasing needs of the future. Cities now are spending only half that much on sewage treatment. The cost to the average family is under 5 cents a day.

Industry also must spend half a billion a year, the PHS says—perhaps more, as chemical firms and others put more and more polluting wastes into the water. A 1954 PHS study showed 5,700 industrial pollution control projects were needed. The figure would run higher now, despite effective efforts being made by many firms (some turning out profitable by-products in the process).

City and industry pollution control facilities

Taft Center expert tests equipment for activitated sludge sewage treatment. Sludge bacteria reduce sewage to harmless materials.

Water Pollution

are estimated to be $4 billion behind the times now, and falling further behind population and industrial growth all the time.

Although pollution must be controlled at its source, the individual city or industrial plant, state and federal efforts are supplementing and stimulating local programs to a large degree. Federal law enforces anti-pollution measures on interstate waters, for example. In addition, the Federal Water Pollution Control Act of 1956 authorized spending up to $50 million a year, to a $500 million total, to help build local sewage treatment plants. Congress this summer debated doubling the amounts.

In the first two years of the program nearly 150 projects were completed, 507 more begun, and a total of 1,038 approved. For more than 500 communities, it's the first time residents have ever had any sewage treatment facilities.

To aid state programs the federal government spends another $3 million a year. With this stimulus, states raised their pollution control expenditures from an average annual total of $4 million to $5.7 million in fiscal 1958.

Water Sampling Network To Be Expanded

Through the PHS's Robert A. Taft Sanitary Engineering Center in Cincinnati, Ohio, the government also provides technical assistance. Water pollution experts there are helping solve such pollution problems as acid drainage from local mines, brine seepage from natural salt deposits in the Southwest, oil seepage in oil-field areas, and radioactive waste disposal.

The Taft Center is the hub of U. S. water pollution research, and of the 51-station national water sampling network which provides the basic data for that research. Plans are for 200 more checkpoints on interstate waters, plus several hundred intrastate and local stations. Water samples sent to the Center are analyzed for the presence, and quantity, of algae and other aquatic microorganisms, organic chemicals, sewage wastes, silt and radioactivity.

Main goal of the research, of course, is to find better and cheaper ways to treat sewage and to control pollution in the first place. Researchers hope to learn, too, whether viruses in impure water cause polio, undulant fever, infectious hepatitis, and if so, to rout those diseases as typhoid and cholera were routed in earlier days of research into contaminated water. ⊙

Taft Center-developed membrane filter traps bacteria, allows quick, accurate determination of water's safety for drinking.

Waste stabilization ponds, like these at Fayette, Kansas, are popular in small towns. Natural process reduces harmful wastes.

New York State Museum and Science Service

Belatedly, allergy research for relief of millions, is substantial.

ALLAYING OUR ALLERGIES

By Dr. Charles D. Marple

Director, Allergy Foundation of America

THIS IS THE PEAK of the hay fever season (August-September) for millions of Americans allergic to ragweed pollen. Literally tons of this pollen are riding the breezes. The sneezing and weeping of hay fever sufferers are rampant. Nature never fizzles with her annual practical joke. But allergy isn't funny.

Throughout the United States millions of days of comfortable, productive living, working, studying and playing are lost each year because of the Pandora's Box of allergic diseases that afflict some 17 million people.

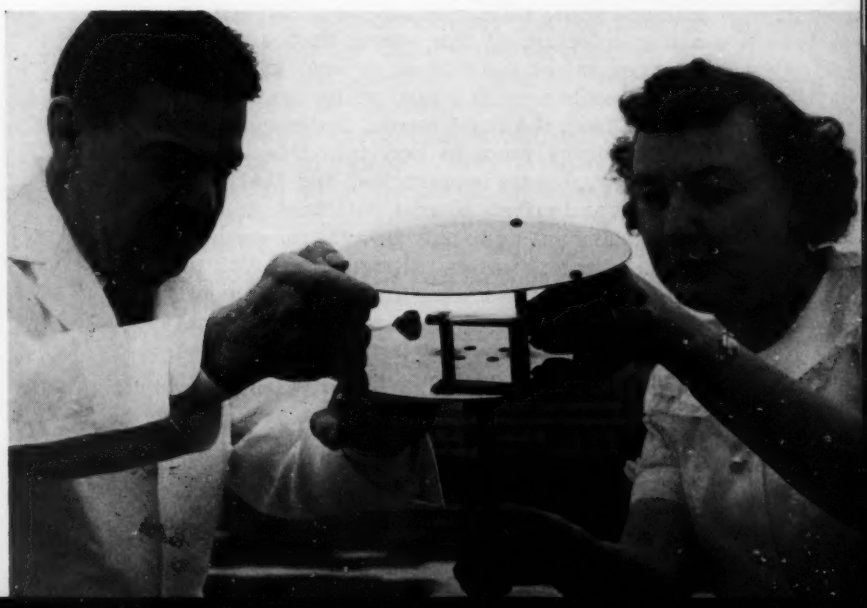
Asthma, alone, causes more disability than poliomyelitis because it often results in crippling lung insufficiency and chronic illness. Fatal allergic shock (anaphylaxis) is a spectre haunting the physician every time he gives a medicine by injection. Even the sting of a tiny bee may be fatal to the allergic individual.

As for hay fever, about 8 million people in the United States are sufferers. One-third of these are breadwinners. They lose about seven work days each year because of the condition, or a total of some 18 million work days.

The most common cause of hay fever in most parts of the United States is ragweed pollen, widely disseminated. The Pollen Survey Committee of the American Academy of Allergy reported a study showing that the upper air concentration of pollen so called out over the middle of one of the Great Lakes was nearly as heavy as at corresponding levels over adjacent city streets and farmlands. Nevertheless there are areas of the nation relatively free of ragweed pollen. The Allergy Foundation pamphlet on hay fever reprints information on these areas for people who want a ragweed-free vacation.

However, the aid of a doctor experienced in the ways of allergy should be sought by anyone contemplating a temporary escape from hay fever or a permanent move. This is a safeguard against the fact that allergic individuals escape this pollen only to find they are hypersensitive to some other substance in the new area.

Giant ragweed, most common cause of hay fever, is being checked *(above)* for radioactive phosphorus, being used in newer research to track down the guilty pollen and other mysteries of allergies, now recognized as widespread public health hazard.



More accurate pollen counting and identification is aiding science in its attack on allergies. Here two University of Michigan allergy specialists reset a "trap" for Ann Arbor area pollen in their search for relief of many helpless pollen-allergy sufferers.

Allaying Our Allergies

Any one of an amazing variety of substances may cause allergy in the person who is abnormally sensitive to it, though certain materials are more commonly offenders than others. Any tissue of the body may react, though certain sites are usually involved.

Allergens (whatever causes an allergy) may be inhaled; swallowed; touched; injected; made within the body itself; received as radiation; influenced by such traumatic things as scratchy clothing, or by worrying, or even by changes in barometric pressure. One person isn't really "allergic" to another, but one person can so upset the emotions of another that an underlying, dormant allergy may be aroused.

Symptoms typical of allergies include coughing, sneezing, wheezing, running of the eyes, headaches, nausea, inflammation, hives, stomach upset, and, in a few cases, shock so severe it may be fatal.

Lucretius in the first century B.C. didn't know the term allergy, but he knew: "What is food to one man may be fierce poison to others."

Allergy Lately Named, Long Neglected

Allergy is a relatively recent medical concept, although there are descriptions of "asthma" in the medical literature of ancient Greece, and one of the earliest recorded cases of allergic shock was the death of King Menes of Egypt in 2641 B.C. from the sting of a hornet or wasp. The term "allergy" was made up in 1906 by the Viennese physician, Dr. Clemens von Pirquet. It means altered reactivity. Von Pirquet and Dr. Bela Schick had observed that among individuals injected with diphtheria antitoxin prepared from the blood-serum of horses immunized against this disease, some developed serum sickness while others became so sensitized by a first injection of this serum that a second injection might cause hives or even kill them. These people were "allergic" to foreign protein derived from the horse serum. Little was done in subsequent years to look into this.

In the five years between 1946 and 1951, government and private sources, combined, granted support amounting to only $800,184 for research on the allergic diseases. Allergies were 26th on a list of 29 diseases receiving research support in this country. Yet the loss to our national economy from allergies is estimated to exceed 25 million man-days annually.

Today the picture is much brighter. Research is being supported on an increasingly larger scale by the U. S. Public Health Service's National Institute of Allergy and Infectious Diseases, both at its own medical center in Bethesda, Maryland, and in institutions and medical centers throughout the country. For example, the Allergy Institute reported to Congress this spring: "Highly productive laboratory research is evolving from the allergy-immunology program initiated three years ago. Basic studies are providing data fundamental to advances in many areas of medicine . . . the research grants program represents a major national effort in this long-neglected specialty. An increase of about $1 million brought total support to about $2 million in 1958, representing approximately 150 grants. In 1959 grant support will approach $3 million."

Foundation Fostering Broad Allergy Program

A program of support for research and professional training in allergy is also being conducted by the Allergy Foundation of America, New York City, as one aspect of its program to promote medical education and research, public education and medical care in allergy.

One in ten of us has some form of allergy. This is a generally accepted fact, although recent surveys in New York City showed a higher incidence, with about one in five afflicted. The most common allergic diseases include hay fever, asthma, eczema, hives, allergies of the eyes, digestive disturbances, and contact dermatitis. However, there are many others less common.

If you eat strawberries and break out in a rash, get a headache each time you take aspirin, find red welts on your wrist whenever you wear

Radioactive ragweed pollen, for tracking-down purposes, being collected at "isotope farm," Brookhaven National Laboratory.
New York State Museum and Science Service

a nickel-plated watch, sneeze violently when a pet dog comes near, go into shock from a penicillin injection, or wheeze away in the presence of certain air-borne molds, dusts, or pollens you are hypersensitive to at least certain allergens.

Mysteries and Complications Are Baffling

However, many individuals are allergic not just to one substance, but to several, or to certain amounts, or to "triggering" factors such as cold, or to internal toxins produced, perhaps, by bacteria. When the mechanisms of allergy are better understood, it may be easier to backtrack on an allergy. But a good deal of mystery still remains in this field. Most physicians believe that allergic individuals inherit the tendency but that their symptoms arise from exposure to substances to which they have become sensitive by frequent, repeated exposure. The allergy may be different in children than in parents. An unusual allergy may be difficult for the most skilled allergist to find.

Skin tests sometimes provide a clue. The doctor exposes the patient to tiny quantities of different substances, such as pollen extracts, house dust and animal danders, applied usually to tiny and superficial scratches on the skin, and watches for the local inflammatory reactions typical of the allergic responses. In some cases, when an allergen has been identified, it is possible to build up some measure of immunity by giving a series of very small and increasingly larger injections of this substance under careful medical supervision. One researcher is attempting to develop a hay-fever immunizing substance, for example, so pure and so slowly fed into the blood stream that a single visit to a physician would suffice to immunize. Others are seeking more potent extracts from bee venom to immunize against stings. Poison oak and poison ivy extracts are given orally in pills—about 200 of them over several weeks—with reported success in many cases of these allergies.

The hay fever sufferer is potentially an asthmatic, because surveys show that many will develop asthma from untreated hay fever. Few people see the struggle of some asthma victims to keep breathing, but this is a desperate situation for many. Many parents hope that their children will just outgrow hay fever or asthma, but medical records show this is a poor gamble. Treatment should be instituted early, before irreversible damage and dangerous complications have set in.

There are no medicines that cure the allergic condition, but many treatments and drugs can prevent severe attacks or modify symptoms. For milder allergies, antihistamines may be employed. Hormones such as ACTH or cortisone or one of the related corticosteroids may be used against certain forms of allergy but are too potent to be used except under the supervision of a physician. For asthma, epinephrine and related sympathomimetic drugs and aminophylline are often effective. Local remedies, such as skin lotions and nose drops, may be prescribed in some cases.

Anything that contributes to sound general health is bound to increase an individual's resistance to allergy, as well as to other diseases. It is always a sound rule that it is best, when possible, to avoid exposure to the substance causing an allergic reaction. Desensitization by means of series of injections is helpful when the cause for allergy has been identified.

The total cost to industry in some 25 million work days lost because of various allergic diseases is incalculable. Airborne allergens affect the allergic worker at home and at work. One of the most frequently encountered problems is that of contact allergies from materials handled in industry, newly introduced chemicals aggravating the situation. There are few occupations in which some allergenic substance cannot sensitize a worker.

Industry Confronted With Special Problems

Discussing the industrial situation in *Compensation Medicine,* June-August 1957, Henry B. Nachtigall, M.D., says, "Our responsibility, consequently, is manifold. First, to detect the occupational causes of respiratory allergic diseases; second, to recommend institution of treatment of such illness; third, to educate both employee and employer so as to avoid continuation of such a hazardous situation. As physicians we are able to assist industry and the working population in preventing the development of temporary and permanent respiratory tract diseases due to occupational causes. . . . Preplacement medical examination should deal with the personal and family history of allergy." Dr. Nachtigall further points out that some control of the industrial environment can be accomplished with ventilator fans or masks, where indicated, but that if the individual will suffer from exposure to certain processes involving material to which he is allergic, he should be given a change of occupation. "It is wisest that the individual be protected in this manner from the

possibility of a loss of livelihood due to a disability which may become total and permanent."

In another significant examination of industrial allergy, Thelma Brock, M.D., comments in the March 1, 1957, issue of *N. Y. State Journal of Medicine:* "At the present time most employees are insured to some extent for injuries or diseases resulting from or aggravated by their occupations. . . . The doctor must state with a reasonable degree of certainty whether the illness, injury, or disability is of occupational origin, whether it is aggravated by the occupation or previous occupation, or whether it has no bearing at all on the occupation. The insurance companies must either accept or reject the claim, a situation which, fortunately for all concerned, has led to considerable study of occupational diseases."

Allergies Now Common Public Health Problem

This considerable study, however, has been slight in comparison to the extent of the problem in industry. Some of the industries in which asthma, for example, may be on a purely allergic basis include the cotton, sugar cane, grain, brewing, woodworking, fur handling, printing, drug, welding, metal working, and mining enterprises. On the farm, molds which grow around grain storage areas may cause a year-round hay fever-asthma problem through air-borne spores. Dr. Brock lists scores of materials that commonly may cause allergic skin disorders. These are of more interest to the physician than to the layman. As Dr. Brock comments, generalizations cannot be made lightly in a field where litigation in compensation cases is involved.

Allergy is increasingly being recognized as a problem to the factory worker, the office clerk, the housewife, the school child; in short, it is a common public health hazard. Increasing numbers of medical investigators, including clinical allergists, are turning their attention to the host of allergic diseases. The magnitude of the problems to be solved in allergy-immunology will undoubtedly challenge the combined resources and skills of all organizations now working in this field—the professional societies, volunteers, medical centers and government health agencies.

Behind this effort are our 17 million people who are sick and tired of being allergic! ⊙

ACCEPTED:

MUTUAL INSURANCE was protectively at hand that dark rainy night when the towboat *Carl D* rammed the bridge at Greenville, Mississippi, and nearly $1 million in consigned market value of lead slipped into 110 feet of ugly looking water. And mutual insurance is on the scene again this month as a unique salvage operation gets underway, aimed at returning that shipment—valued at about $700,000 today—to the U. S. economic stockpile.

According to the Army Corps of Engineers, watchdogs of inland navigation, the *Carl D* collided with a pier of the Greenville Bridge (Highway 82) in the early hours of March 21, 1957. The lead lost from barges in tow amounted to about half of a shipment en route to Baton Rouge, Louisiana, for use in the manufacturing of gasoline.

Atlantic Mutual Insurance Company, 117-year-old marine, fire and casualty firm that wrote historic policies on the ill-fated *Titanic* and the 19th century ghost ship *Mary Celeste*, filled the protective role when the lead went down and is presently directing the salvage attempt. McFarlane Marine, Inc., of Rochester, New York, has been assigned to the actual task of devising and operating the special barges and "clam" required to make the recovery.

The McFarlane firm made a preliminary pass at the lead in 1958, but "recovery attempts so far have been exploratory," says Charles McKenzie, claims secretary for Atlantic Mutual. "We are putting an intensive effort into the actual salvage operation this summer."

The job is anything but routine. "The lead blocks are imbedded in the bottom from 7 to 35

Unusual salvage attempt in progress off Arkansas shore centers where river is half-mile wide, 80 to 110 feet deep with currents up to 12 knots. At the bottom: a costly lead cargo.

ONE $700,000 CHALLENGE

feet," reports Arthur M. McFarlane. There are some 3,000 of the "pigs" down there, each weighing a long ton (2,240 pounds).

Added difficulties of the job are pointed out by Captain Henry C. Muirhead, retired Mississippi master and pilot and consultant on the recovery attempt: "The use of divers is impossible owing to the depth, swift current, heavy running driftwood and heavy navigation through the bridge spans."

Even so, Muirhead believes the operation can be successfully concluded and that "at least 80 per cent of the lead will be recovered." Insurance representatives and the salvage crew—though optimistic—are not making predictions. But they're quietly giving Davy Jones' inland counterpart no quarter in their efforts to put a valuable cargo back into the American production cycle and cross another economic loss off the nation's books. ⊙

U. S. Army Corps of Engineers

Radio Corporation of America

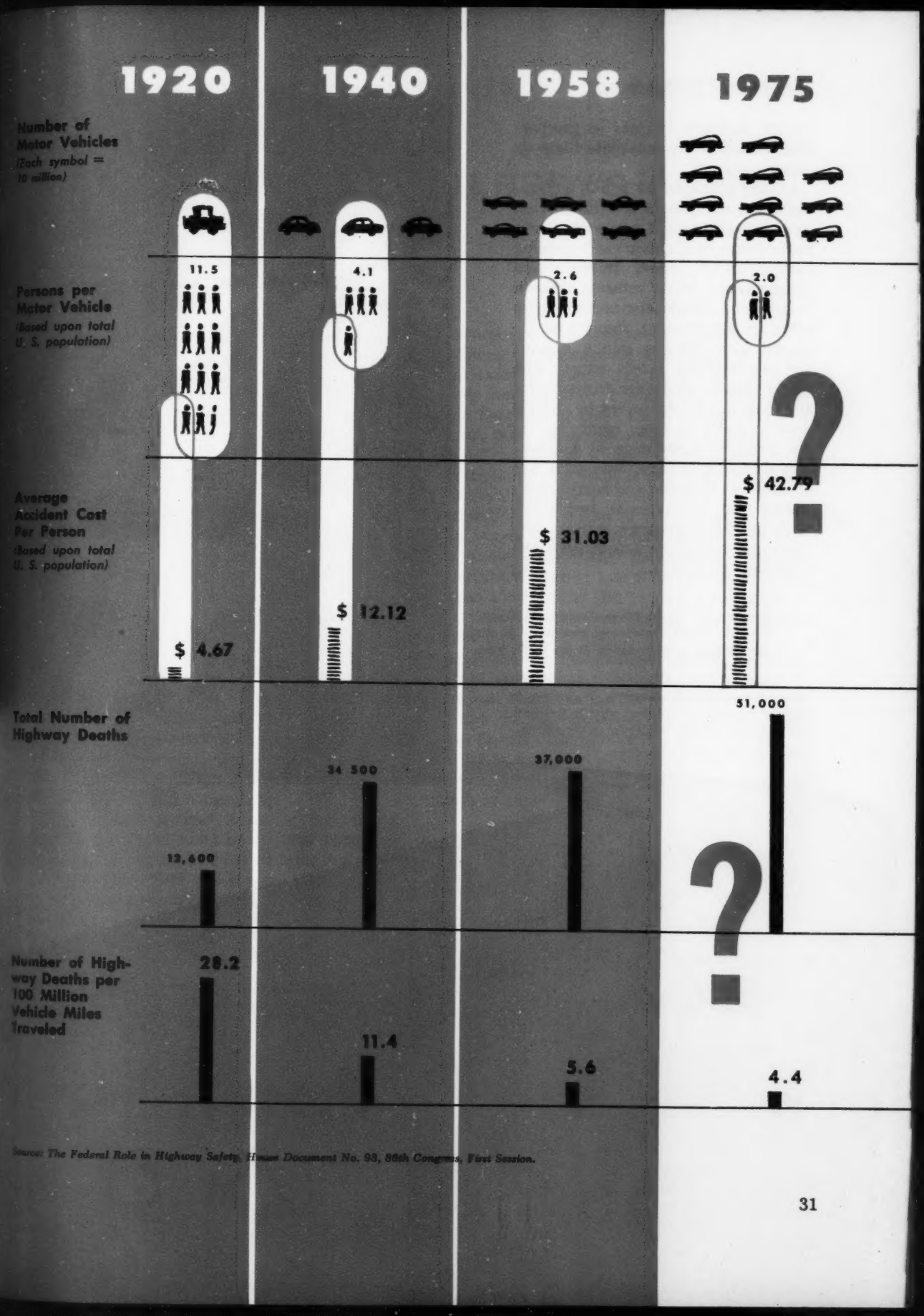
Instantaneous transmission of traffic information, at Lincoln Tunnel's New York entrance, from atop 35-story building using a newly developed portable pocket-sized two-way radio unit.

HIGHWAY "HORRORSCOPE" - 1975

Accidents, Deaths and Corrective Design

IT WAS THE "DEVIL WAGON," as denounced in the press of 1900, but the motor vehicle has surmounted that indictment to become indispensable in our national and private life. By 1975 the 4,000 "devil wagons" of 1900 will have multiplied into 110 million registered motor vehicles, and the total cost of traffic accidents, including property damage, wage loss, medical expense, and the overhead cost of insurance, will be a predicted $9.5 billion a year.

None too soon, the "devil-wagon" blame has come off the motor vehicle itself; forward-looking solutions now stress the complex of



Source: *The Federal Role in Highway Safety*, House Document No. 93, 86th Congress, First Session.

driver, highway and car as inseparably linked in any adequate highway safety program.

If the predicted 1975 toll is forestalled, it will have to be through such advances as depicted here and in previous issues of the Journal, including among others, driver training and improvement, better vehicles, modern highway and traffic engineering, more effective enforcement, stepped-up research and stronger public support for the highway safety effort. The newly formed Insurance Institute for Highway Safety, supported by the 532 auto casualty member companies of the National Association of Automotive Mutual Insurance Companies, Association of Casualty and Surety Companies and the National Association of Independent Insurers, is the united insurance industry's attack upon the challenge of 1975. ⊙

Attesting to its life-saving features, Chicago's Congress Street Expressway completed its first year without a fatal mishap in the traffic lanes.

Portland Cement Association

Tomorrow's completely automatic highway, in model scale, with control-signal wires in the roadbed operating through electronics in the vehicles.

General Motors Research Laboratories

Commissioner of Banking and Insurance Charles R. Howell, NAIC Zone 1 Chairman. His insurance career began in 1928.

CLOSE-UPS OF OUR COMMISSIONERS

NEW JERSEY'S HOWELL

FOR A STATE 46th in size, Commissioner Charles R. Howell's New Jersey is about the biggest little state in the U. S. Among many notable firsts, it is premier in farm income per acre, and every one of its 8,204 acres is cited for something interesting, making the Garden State truly versatile and diversified. Even the "Original People" are a heritage of New Jersey, the inhabiting Indians' name of Lenni Lenape being of that meaning. Now the state is eighth in population, fifth in income per capita and seventh in value of goods added by manufacture.

Not the least of the state's affluence in its motto of "Liberty and Prosperity" comes from one of the nation's leading resort industries, centering on the famous Jersey coastline. For liberty attestation, New Jersey cites its title of "Cockpit of the Revolution," acquired through the fact that General Washington spent more time in New Jersey during the active phase of the war than in any other state.

New Jersey's present rank as the eighth state in volume of fire and casualty insurance premiums is rooted in some notable industry-insurance ties. Here was the spawning ground of the first steamboats (1786-1791), the first American steam locomotive (1824), the world's first practical incandescent lamp (1879), the first successful submarine (1881) and the first smokeless powder (1891).

The state has been making history and news ever since, all of it interlaced in the substantial gains made by the insurance industry during recent years. Net premiums written by fire and casualty companies during calendar 1958 totaled more than $521 million. During recent years mutual companies have made a 29 per cent increase in direct premiums written on fire and casualty insurance; stock companies 12 per cent.

Commissioner Howell, newly elected Zone 1 chairman of the National Association of Insurance Commissioners, has held office as New Jersey Commissioner of Banking and Insurance since February 7, 1955. He is a native Garden Stater, born April 23, 1904, in Trenton, and trained in special courses in insurance, economics and social fields at Princeton University and the University of Pennsylvania.

Howell was the first in the Trenton area to pass examinations and receive the chartered life underwriter (CLU) designation from the American College of Life Underwriters. He is a former president of the Trenton Association of Life Underwriters and former vice president of the New Jersey unit.

In public life, Commissioner Howell was twice elected assemblyman from Mercer County, in 1944 and 1945, was elected to Congress in 1948, '50 and '52 and has been a candidate for the U. S. Senate. Along with his official duties in the NAIC he is also chairman of the legislative committee of the National Association of Supervisors of State Banks. ⊙

Atlantic City, scene this month of a 4-H fair, 5 conventions and 13 miles of the most prosperous beaches in the country.

New Jersey Department of Conservation and Economic Development

PAN AMERICAN

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